

# Kaysville City, UT

## Electric Rate Study Results

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# Assumptions

- Purchase Power
  - 2.5% increase through 2021
- Annual Inflation
  - 2.5% increase through 2021
- Annual Growth
  - 1.5% increase through 2021
- Financing New Building
  - Start building in 2020
  - Over 12 years
  - 6% interest rate
- Capital Plan
  - 2017 - \$2,250,000
  - 2018 - \$1,950,000
  - 2019 - \$750,000
  - 2020 - \$750,000
    - Plus building cost of \$4.6M
  - 2021 - \$750,000

# Projection without Rate Change

Fiscal Year	Projected Rate Adjustments	Debt Coverage Ratio	Projected Expenses	Projected Revenues	Adjusted Operating Income	Target Operating Income	Projected Cash Balances	Recommended Minimum Cash
2017	0.0%	-	\$ 14,089,552	\$ 12,350,988	\$ (998,015)	\$ 986,760	\$ 4,388,102	\$ 3,073,895
2018	0.0%	-	14,633,911	12,537,253	(1,352,406)	1,047,210	2,269,587	2,897,123
2019	0.0%	-	15,173,848	12,726,337	(1,699,538)	1,070,460	1,034,302	2,770,385
2020	0.0%	-	15,784,316	12,918,283	(2,114,321)	990,752	(529,474)	3,158,079
2021	0.0%	(4.25)	16,414,541	13,113,134	(2,545,936)	1,017,646	(2,710,241)	3,289,225

# Recommended Rate Track

Fiscal Year	Projected Rate Adjustments	Debt Coverage Ratio	Projected Expenses	Projected Revenues	Adjusted Operating Income	Target Operating Income	Projected Cash Balances	Recommended Minimum Cash
2017	5.5%	-	\$ 14,089,552	\$ 13,024,793	\$ (324,211)	\$ 986,760	\$ 5,061,907	\$ 3,073,895
2018	4.9%	-	14,633,911	13,863,979	(25,680)	1,047,210	4,273,487	2,897,123
2019	4.9%	-	15,173,848	14,757,391	331,516	1,070,460	5,079,275	2,770,385
2020	4.9%	-	15,784,316	15,708,536	675,932	990,752	6,325,977	3,158,079
2021	4.9%	9.10	16,414,541	16,721,149	1,062,079	1,017,646	7,784,856	3,289,225

# Debt Coverage Ratio

Description	Projected 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021
Debt Coverage Ratio					
Net Income	\$ (952,106)	\$ (1,321,527)	\$ (1,679,206)	\$ (2,100,121)	\$ (2,536,862)
Add Depreciation/Amortization Expense	1,089,375	1,153,012	1,193,921	1,286,345	1,378,769
Add Interest Expense	-	-	-	-	-
Cash Available for Debt Service	\$ 137,269	\$ (168,515)	\$ (485,285)	\$ (813,776)	\$ (1,158,093)
Debt Principal and Interest	\$ -	\$ -	\$ -	\$ -	\$ 272,674
<b>Projected Debt Coverage Ratio (Covenants)</b>	-	-	-	-	<b>(4.25)</b>
<b>Minimum Debt Coverage Ratio</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>

# Electric Department

## Minimum Cash Reserve

Description	Projected 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021
<b>Minimum Cash Reserve Allocation</b>					
Operation & Maintenance Less Depreciation Expense	12.3%	12.3%	12.3%	12.3%	12.3%
Purchase Power Expense	11.0%	11.0%	11.0%	11.0%	11.0%
Historical Rate Base	1%	1%	1%	1%	1%
Current Portion of Debt Service Payment	83%	83%	83%	83%	83%
Five Year Capital Improvements - Net of bond proceeds	20%	20%	20%	20%	20%
<b>Calculated Minimum Cash Level</b>					
Operation & Maintenance Less Depreciation Expense	\$ 354,104	\$ 362,956	\$ 372,030	\$ 381,331	\$ 390,864
Purchase Power Expense	1,111,481	1,156,357	1,203,045	1,251,618	1,302,152
Historical Rate Base	318,310	337,810	345,310	398,810	406,310
Current Portion of Debt Service Reserve	-	-	-	226,320	239,899
Five Year Capital Improvements - Net of bond proceeds	1,290,000	1,040,000	850,000	900,000	950,000
<b>Minimum Cash Reserve Levels</b>	<b>\$ 3,073,895</b>	<b>\$ 2,897,123</b>	<b>\$ 2,770,385</b>	<b>\$ 3,158,079</b>	<b>\$ 3,289,225</b>
<b>Projected Cash Reserves</b>	<b>\$ 4,388,102</b>	<b>\$ 2,269,587</b>	<b>\$ 1,034,302</b>	<b>\$ (529,474)</b>	<b>\$ (2,710,241)</b>

# Electric Department

## Target Operating Income

Description	Projected 2017		Projected 2018		Projected 2019		Projected 2020		Projected 2021	
Target Operating Income Determinants										
Net Book Value/Working Capital	\$	18,742,893	\$	19,539,881	\$	19,095,960	\$	23,159,615	\$	22,530,846
Outstanding Principal on Debt		-		-		-		4,600,000		4,327,326
System Equity	\$	18,742,893	\$	19,539,881	\$	19,095,960	\$	18,559,615	\$	18,203,520
Target Operating Income Allocation										
Interest on Debt		0.00%		0.00%		0.00%		0.00%		0.00%
System Equity		5.26%		5.36%		5.61%		5.34%		5.59%
Target Operating Income										
Interest on Debt	\$	-	\$	-	\$	-	\$	-	\$	-
Contributed Capital Estimated		-		-		-		-		-
System Equity	\$	986,760	\$	1,047,210	\$	1,070,460	\$	990,752	\$	1,017,646
Target Operating Income	\$	986,760	\$	1,047,210	\$	1,070,460	\$	990,752	\$	1,017,646
Projected Operating Income	\$	(998,015)	\$	(1,352,406)	\$	(1,699,538)	\$	(2,114,321)	\$	(2,545,936)
Rate of Return in %		5.3%		5.4%		5.6%		4.3%		4.5%

# Electric Cost of Service Results

Customer Class	Cost of Service	Projected Revenues	% Change
Residential	\$ 8,912,364	\$ 8,210,895	8.5%
Commercial	4,973,222	3,765,593	32.1%
Industrial	190,332	124,755	52.6%
Area Lights	14,425	13,308	8.4%
Street Lights	145,421	136,437	6.6%
Total	\$ 14,235,764	\$ 12,250,988	16.2%



# Energy Charges

Customer Class	Cost of Service \$/kWh	Projected Revenues \$/kWh
Residential	0.1023	0.0943
Area Lights	0.1695	0.1563
Street Lights	0.2933	0.2752
Commercial	0.1082	0.0820
Industrial	0.1035	0.0679

# Monthly Charge

Customer Class	Current Customer Charge	COS Customer Charge
Residential	\$ -	\$ 13.05
Commercial	-	53.62
Industrial	-	139.20

# Solar Avoided Cost per kWh

No.	Residential	Commercial
1 Power Supply Savings	0.0589	0.0589
2 Subtransmission	0.0006	0.0006
3 Distribution	0.0004	0.0024
<b>Avoided Cost per kWh</b>	<b>0.0599</b>	<b>0.0618</b>

# Residential Option

Residential Charge per kW of Solar Installation		
Average Residential Rate	\$	0.0943
Avoided Cost		0.0599
Lost Revenues per kWh		0.0344
Annual kWh production from 1 kW of Solar		1,332
Annual Under-Recovery from Solar	\$	45.82
<b>Additional Monthly Charge per kW of installed Solar</b>	<b>\$</b>	<b>3.82</b>

- Additional Charge per Month per installed kW. Example:  
5 kW Solar unit would be Charged \$19.09 (\$3.82 times five)